



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/857,688      | 10/03/2001  | John Coogan          | 024444-938          | 6445             |

21839 7590 04/18/2006

BUCHANAN INGERSOLL PC  
(INCLUDING BURNS, DOANE, SWECKER & MATHIS)  
POST OFFICE BOX 1404  
ALEXANDRIA, VA 22313-1404

EXAMINER

TRUONG, THANH K

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

3721

DATE MAILED: 04/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.



UNITED STATES PATENT AND TRADEMARK OFFICE

---

Commissioner for Patents  
United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/857,688  
Filing Date: October 03, 2001  
Appellant(s): COOGAN ET AL.

**MAILED**

APR 18 2006

Group 3700

---

Elaine P. Spector  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed February 13, 2006 appealing from the Office action mailed December 9, 2004.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 15-24, 27-31 and 33-37 are rejected under 35 U.S.C. 102(b) as being anticipated by Rinnemaa (5,383,524).

Rinnemaa discloses a method and apparatus for correcting positioning error in rock drilling comprising: a carrier 1; a boom 3 attached turnable about joints 2 in relation to the carrier; rock drill 6; joint sensors 7; control device 14; a memory and calculating device 8, 13. The deviation of the boom position from the theoretical position is measured at predetermined intervals (inherently discloses) as a function of the position of boom joint, and the position is corrected on the basis of the stored deviation that corresponds to the position of the joint corresponding to the drilling position (column 2, lines 62-68 and column 3, lines 1-5).

Rinnemaa further discloses that the deviation of the boom position from the calculated theoretical position is measured as a function of both angles, in horizontal and vertical directions, in a two-dimensional coordinate system, the deviation is defined as a function of the positions of the crossing points (column 3, lines 58-68 and column 4, lines 1-4).

The deviations corresponding to each joint position are measured in a certain joint position value and the calculated theoretical position of the boom is corrected on the basis of the deviations corresponding to the joint positions obtained in this way (column 3, lines 10-16).

Rinnemaa also discloses that the deviation values stored in a memory (column 7, lines 54-59); and an outer section of the boom is linearly extendable and retractable relative to the inner section (column 7, line 68 and column 8, line1).

#### **(10) Response to Argument**

In response to the Appellant's argument that the Rinnemas invention deals with deviation based upon geometry and not for reasons caused by "loose joints, deformation of parts or looseness between parts" as in the present application claimed invention. Appellant misinterprets the principle that claims are interpreted in the light of the specification. Although these elements "loose joints, deformation of parts or looseness between parts" are found as examples or embodiments in the specification, they were not claimed explicitly. Nor were the words that are used in the claims defined in the specification to require these limitations. A reading of the specification provides no evidence to indicate that these limitations must be imported into the claims to give meaning to disputed terms. *Constant v. Advanced Micro-Devices, Inc.*, 7 USPQ2d 1064.

In response to the Appellant's argument that the cited passage from Rinnemaa (column 2, lines 62-68 and column 3, lines 1-5) does not disclose "to measure a

Art Unit: 3721

deviation" and "no deviations are measured or stored", the examiner respectfully disagrees.

*"This is achieved by means of a method according to the invention in such a way that the angle value indicated by the sensor is corrected by calculation in such a way that it corresponds to the actual angle of inclination of the feeding beam by allowing for the influence of an error caused by the inclination of the feeding beam in the other measuring plane at an angle with respect to the measuring plane of the sensor, and that the feeding beam is aligned in a predetermined direction on the basis of the angle value of the sensor after the value has been corrected by calculation so that it corresponds to the actual angle of inclination" (Rinnemaa - column 2, lines 62-68 and column 3, lines 1-5) (emphases added).*

The examiner construes that (from the disclosure of the entire reference of Rinnemaa) the sensor provides the data for the calculation of the deviation and then stored in the memory of the calculation unit for subsequent operation as correction values, for examples:

*"The difference between the angle values obtained by the sensors and the actual angle of the feeding beam in the direction of a predetermined plane is compensated for by calculating this error" (column 3, lines 10-13) (emphases added);*

*"whereby these values can be set in the memory of the calculator unit, and the correction calculation needed in the positioning of the feeding beam and the boom can then be made on the basis of the inclination values of the carrier set in the memory as long as the carrier is not displaced" (column 7, lines 54-59) (emphases added); and*

*"The difference between the angle values obtained by the sensors and the actual angle of the feeding beam in the direction of a predetermined plane is compensated for by calculating this error" (column 3, lines 10-13) (emphases added).*

The difference between the values as mention above is the deviation that are calculated and stored for further use.

Art Unit: 3721

Accordingly, the examiner construes that the phrase "corrected by calculation" implies the deviation was measured and stored in the memory before the calculation is performed.

In response to the Appellant's argument that Rinnemaa cited passage in column 7, lines 50-59 "has nothing to do with the storing of boom deviations as in the presently claimed invention, the examiner would like to point out that, this passages may not mentions the boom directly, but as a whole, the reference of Rinnemaa discloses the storing of boom deviations as recited in the claimed invention.

*"The x angle is measured with respect to the joint between the feeding beam and the boom and is corrected by calculation to obtain the actual x angle, taking into account the angle error caused by the y angle. If the boom deviates from the direction of the y plane, the corresponding mathematical correction are made both in the y angle and on the basis of it in the x angle to achieve the actual direction angles" (column 3, lines 25-32) (emphases added).*

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

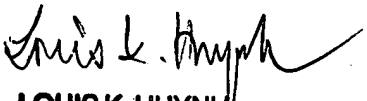
Thanh Truong

Conferees:

John Sipos

Louis Huynh

Thanh Truong

  
LOUIS K. HUYNH  
PRIMARY EXAMINER